

# XP Battery Module

Valence Technology delivers safe lithium phosphate energy storage solutions in standard BCI lead-acid battery sizes for a wide variety of applications.



## Overview

The U-Charge<sup>®</sup> Energy Storage and Management Systems are a family of 12V and 18V battery modules and accessories. The U-Charge Battery Modules offer twice the run-time and nearly half the weight of similar sized lead-acid batteries. They are built with Valence Lithium Phosphate Technology that offers outstanding intrinsic safety and excellent float and cycle life resulting in low cost of ownership. Thousands of U-Charge systems have been deployed since 2006 across numerous motive and energy storage applications.

The U-Charge XP Energy Storage Systems offer easy scalability of voltage and capacity, and flexible battery management systems. The U-Charge XP series is designed for high current, high voltage applications.

## Features

- Thousands of cycles, 100% DOD, under normal conditions
- Exceptional voltage stability
- Application voltages from 12V - 700V
- Maintenance free
- Internal cell balancing
- Can be charged using most standard lead-acid chargers (set for AGM/GEL cells)
- Communication of monitored data via Battery Management System (BMS)
- Rugged mechanical design
- Dust and water resistant to IP56 standards
- Flame retardant plastics
- LED battery status indicator
- Carrying Straps on U24, U27 and UEV models



Specifications		U1-12XP	U24-12XP	U27-12XP	UEV-18XP
Voltage		12.8 V	12.8 V	12.8 V	19.2 V
Nominal Capacity (C/5, 23°C)		40 Ah	110 Ah	138 Ah	69 Aha
Weight (approximate)		6.5 kg	15.8 kg	19.5 kg	14.9 kg
Dimension incl. Terminals LxWx H		197x131x183mm	260x172x225mm	306x172x225mm	269x148x261mm
BCI Group Number		U1R	Group 24	Group 27	N/A
Terminals, Female-Threaded		1/4-20	M8 x 1.25	M8 x 1.25	M8 x 1.25
Specific Energy		79 Wh/kg	89 Wh/kg	91 Wh/kg	89 Wh/kg
Energy Density		110 Wh/l	139 Wh/l	148 Wh/l	124 Wh/l
Standard Discharge @ 23°C	Max. Cont Current	80 A	150 A	150 A	120 A
	Max. 30 sec. Pulse	120 A	300 A	300 A	200 A
	Cut-off Voltage	10 V	10 V	10 V	15 V
Standard Charge	Charge Voltage	14.6 V	14.6 V	14.6 V	21.9 V
	Float	13.8 V	13.8 V	13.8 V	20.7 V
	Recommended	20 A	55 A	70 A	35 A
	Charge Time	2.5 hrs	2.5 hrs	2.5 hrs	2.5 hrs
DC internal resistance (max)		15 mΩ	6 mΩ	5 mΩ	10 mΩ

**Common specifications**

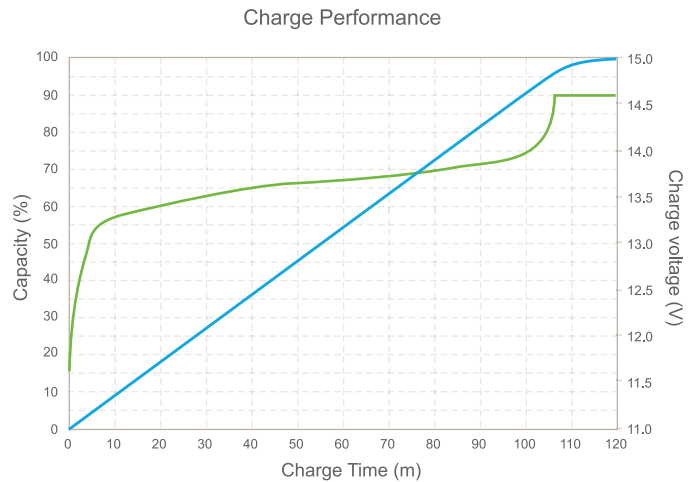
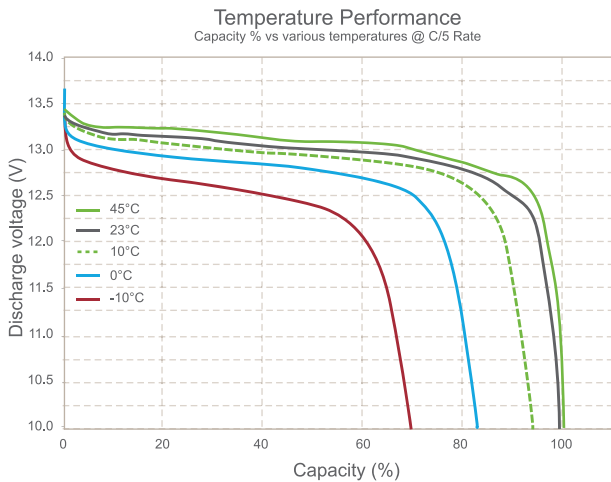
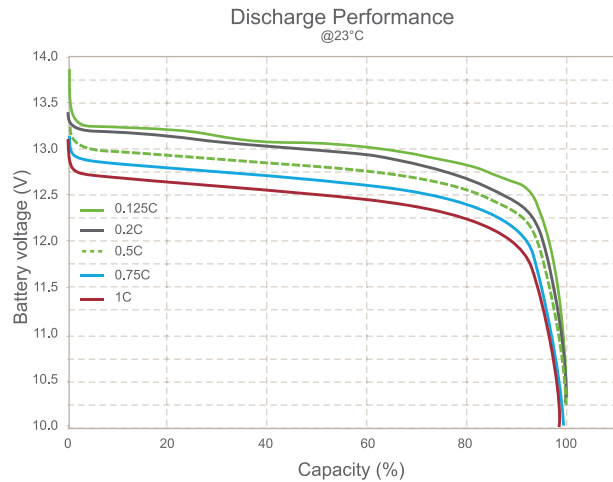
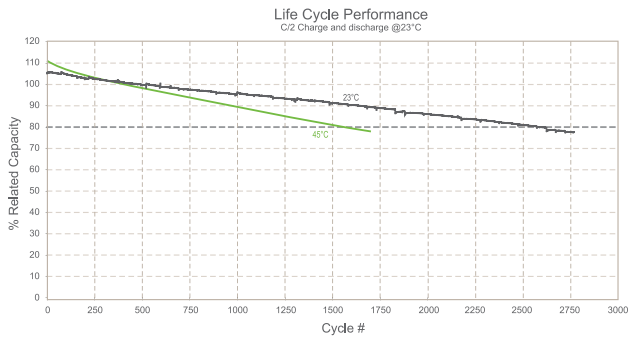
Operating temperature	-10°C to 50°C
Storage temperature	-40°C to 50°C
Operating humidity	5% to 95%, non-condensing
Water/dust resistance	IP56
Shock and vibration	IEC62133, DIN VG96 924
Certifications	FCC Class B, CE, UL1642 (cells only)
Shipping Classification	UN 3480, Class 9

**Accessories**

U-BMS-HV and U-BMS-LV: Battery Management Systems that feature battery to battery balance control, direct control capability for up to four contactors, and CAN-Bus communications port for monitoring and control of data systems.

-  U-BMS-HV operates at 100V - 450V
-  U-BMS-LV operates at 10V - 150V

Please refer to separate datasheet on the U-BMS products or visit the U-BMS section on the website for more information.



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